

Appl. No. 10/775,234  
Amendment dated August 4, 2005  
Reply to Office Action of March 18, 2005

**AMENDMENTS TO THE DRAWINGS:**

The attached sheets of drawings include a change to Figures 1 and 2. These sheets, which include Figures 1 and 2, replace the original sheets including Figures 1 and 2.

Attachment: two (2) replacement sheets

### REMARKS

In the March 18, 2005 Office Action, the drawings were objected to and claims 1-13 stand rejected in view of prior art. Claim 7 also was rejected for failing to indicate and to claim particularly and distinctly the subject matter that Applicants regard as the invention. In the March 18, 2005 Office Action, all of the claims stand rejected in view of prior art. No other objections or rejections were made in the Office Action.

#### *Status of Claims and Amendments*

In response to the March 18, 2005 Office Action, Applicants have amended the drawings and claims 6 and 7 as indicated above, and have cancelled claims 1-5 and 10-13. Moreover, Applicants have amended claim 9 and the specification to correct typographical or form errors discovered upon review. Thus, claims 6-9 are pending, with claim 6 being the only independent claim. Reexamination and reconsideration of the pending claims are respectfully requested in view of above amendments and the following comments.

#### *Specification*

Applicants have amended paragraph [0050] to read, -- In this case, the quantity of current provided by the first current source I31 and amplification unit 310 is identical to the sum of currents  $I_c$  passed by the collectors of the second and third NPN transistors BN32 and BN33 of the mixing unit 330 and larger than the quantity of current passed by the first NPN transistor BN31 of the amplification unit 310. -- Since this feature is inherent in the drawings, Applicants respectfully assert that no new matter has been added.

#### *Drawings*

In item 1 of the Office Action, the drawings were objected to. Specifically, Figures 1 and 2 were objected to because they only show that which is old and lack a legend such as -- Prior Art --. In response, Applicants have filed herewith corrected drawings. Specifically,

Applicants have filed replacement drawings for Figures 1 and 2 that have a legend reading -- Prior Art -- as suggested. Applicants respectfully request withdrawal of the objections.

***Claim Rejections - 35 U.S.C. §112***

In item 3 of the Office Action, claim 7 was rejected under 35 U.S.C. §112, second paragraph. In response, Applicants have amended claim 7.

Specifically, claim 7 was rejected for reciting the term, "a second voltage source" without antecedent basis. In response, the term "second" has been deleted.

Applicants believe that the claims now comply with 35 U.S.C. §112, second paragraph. Withdrawal of the rejection is respectfully requested.

***Rejections - 35 U.S.C. § 102***

In item 5 of the Office Action, claims 6, 7, and 9 stand rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 5,748,041 (Kimura). In response, Applicants have amended independent claim 6 and to define clearly the present invention over the prior art of record.

In particular, independent claim 6 now recites that the quantity of current provided to the mixing unit is equal to the specific quantity of current provided by the current source and a quantity of current provided by the amplification unit. As seen in Figure 1 of Kimura, the quantity of current provided to the mixing unit and the amplification unit is provided solely by the current source.

Clearly, this structure is *not* disclosed or suggested by Kimura or any other prior art of record. It is well settled under U.S. patent law that for a reference to anticipate a claim, the reference must disclose each element of the claim within the reference. Therefore, Applicants respectfully submit that claim 6, as now amended, is not anticipated by the prior art of record. Withdrawal of this rejection is respectfully requested.

Moreover, Applicants believe that dependent claims 7, 8, and 9 are also allowable over the prior art of record in that they depend from independent claim 6, and therefore are allowable for the reasons stated above. Also, the dependent claims are further allowable because they include additional limitations. Thus, Applicants believe that since the prior art of record does not anticipate the independent claim 6, neither does the prior art anticipate the dependent claims.

Applicants respectfully request withdrawal of the rejections.

***Rejections - 35 U.S.C. § 103***

In item 7 of the Office Action, claims 1-4, 8, and 10-13 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 5,748,041 (Kimura) in view of U.S. Patent No. 6,147,559 (Fong). Further, in item 8 of the Office Action, claim 5 stands rejected under 35 U.S.C. §103(a) as being unpatentable over Kimura in view of Fong, and further in view of U.S. Patent No. 6,094,084 (Abou-Allam et al.). In response, Applicants have amended independent claim 6, and deleted claims 1-5 and 10-13 rendering the rejections thereto moot.

In particular, independent claim 6 now recites that the quantity of current provided to the mixing unit and amplification unit is equal to the specific quantity of current provided by the current source and a quantity of current provided by the amplification unit. As seen in Figure 1 of Kimura, the quantity of current provided to the mixing unit is provided solely by the current source. Further Fong, which is referenced to show a capacitor connecting first and second terminals of an amplification element, also fails to disclose or suggest this feature. Since neither reference discloses or suggests this feature, the combination thereof also fails to disclose or to suggest this feature.

Clearly the arrangement of claim 6 is *not* disclosed or suggested by the prior art of record. It is well settled in U.S. patent law that the mere fact that the prior art can be modified does *not* make the modification obvious, unless the prior art *suggests* the desirability of the modification. Accordingly, the prior art of record lacks any suggestion or expectation of success for combining the patents to create the Applicants' unique arrangement of a mixer circuit.

Moreover, Applicants believe that the dependent claim 8 is also allowable over the prior art of record in that it depends from independent claim 6, and therefore is allowable for the reasons stated above. Also, the dependent claim is further allowable because it includes additional limitations. Thus, Applicants believe that since the prior art of record does not disclose or suggest the invention as set forth in independent claim 6, the prior art of record also fails to disclose or suggest the invention as set forth in the dependent claim.

Therefore, Applicants respectfully request that this rejection be withdrawn in view of the above comments and amendments.

***Prior Art Citation***

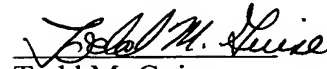
In the Office Action, additional prior art references were made of record. Applicants believe that these references do not render the claimed invention obvious.

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In view of the foregoing amendment and comments, Applicants respectfully assert that claims 6-9 are now in condition for allowance. Reexamination and reconsideration of the pending claims are respectfully requested.

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Respectfully submitted,

  
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